

Managing Your Hazardous Waste

A Guide for Small Businesses

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INTRODUCTION

Does your business generate hazardous waste? Many small businesses do. If you need help understanding which federal hazardous waste management regulations apply to your business, this handbook is for you. It has been prepared by the U.S. Environmental Protection Agency (EPA) to help small-business owners and operators understand how best to comply with federal hazardous waste management regulations.

This handbook provides an overview of the regulations to give you a basic understanding of your responsibilities. It should not be used as a substitute for the actual requirements. All of the federal hazardous waste regulations are located in Title 40 of the Code of Federal Regulations (CFR), Parts 260 to 299 (www.epa.gov/epacfr40).

EPA defines three categories of hazardous waste generators based upon the quantity of hazardous waste they generate per month:

- (1) Conditionally exempt small quantity generators (CESQGs), which generate less than 220 lbs (100 kg) per month.
- (2) Small quantity generators (SQGs), which generate between 220 lbs (100 kg) and 2,200 lbs (1,000 kg) per month.
- (3) Large quantity generators (LQGs), which generate more than 2,200 lbs (1,000 kg) per month.

Each category of generator must comply with the hazardous waste rules specific to that category. This handbook is intended primarily for businesses that generate a small quantity of hazardous waste (SQGs and CESQGs) to help them learn about regulations that apply to them.

This handbook explains only the *federal* requirements for hazardous waste management. Many *states* have their own hazardous waste regulations based on the federal

TIP

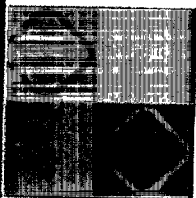
You can look up unfamiliar words, phrases, or acronyms in the list of definitions found on page 26.

hazardous waste regulations. In some of these states, the requirements are the same as the federal standards and definitions. Other states, however, have developed more stringent requirements than the federal program. If this is the case in your state, you must comply with the state regulations. To become familiar with your state's requirements, consult your state hazardous waste agency. For the address or phone number for your state agency, contact the RCRA Call Center at 800 424-9346 or TDD 800 553-7672.

FOR MORE INFORMATION

If you have questions about any part of this book, or the federal hazardous waste regulations, contact the RCRA Call Center at 703 412-9810 or TDD 703 412-3323 in the Washington, DC, area or at 800 424-9346 or TDD 800 553-7672 from other locations, or www.epa.gov/epaoswer/hotline.

The Call Center provides free technical assistance. Any information you share will not be used for any other purpose.



DECIDING WHETHER HAZARDOUS WASTE REGULATIONS APPLY TO YOU

Federal hazardous waste management regulations apply to most businesses that generate hazardous waste. To determine if these regulations apply to your business, you must first determine if you even generate hazardous waste.

Defining Hazardous Waste

A waste is any solid, liquid, or contained gaseous material that is discarded by being disposed of, burned or incinerated, or recycled. (There are some exceptions for recycled materials.) It can be the by-product of a manufacturing process or simply a commercial product that you use in your business—such as a cleaning fluid or battery acid—and that is being disposed of. Even materials that are recyclable or can be reused in some way (such as

burning solvents for fuel) might be considered waste.

Hazardous waste can be one of two types:

►► **Listed waste.** Your waste is considered hazardous if it appears on one of four lists published in the Code of Federal Regulations (40 CFR Part 261). Currently, more than 500 wastes are listed. Wastes are listed as hazardous because they are known to be harmful to human health and the environment when not managed properly.

Even when managed properly, some listed wastes are so dangerous that they are called **acutely hazardous wastes**. Examples of acutely hazardous wastes include wastes generated from some pesticides and that can be fatal to humans even in low doses.

►► **Characteristic wastes.** If your waste does not appear on one of the hazardous waste lists, it still might be considered hazardous if it

demonstrates one or more of the following characteristics:

- It catches fire under certain conditions. This is known as an **ignitable** waste. Examples are paints and certain degreasers and solvents.
- It corrodes metals or has a very high or low pH. This is known as a **corrosive** waste. Examples are rust removers, acid or alkaline cleaning fluids, and battery acid.
- It is unstable and explodes or produces toxic fumes, gases, and vapors when mixed with water or under other conditions such as heat or pressure. This is known as a **reactive** waste. Examples are certain cyanides or sulfide-bearing wastes.
- It is harmful or fatal when ingested or absorbed, or it leaches toxic chemicals into the soil or ground water when disposed of on land. This is known as a **toxic** waste. Examples are wastes that contain high concentrations of heavy metals, such as cadmium, lead, or mercury.

You can determine if your waste is toxic by having it tested using the Toxicity Characteristic Leaching

● Determine if you generate hazardous waste in the first place.

● Measure the amount of hazardous waste that you produce per month.

● Determine your generator category to learn the management requirements that apply to you.

TIP

One way to help determine if your waste exhibits any of the characteristics listed on page 2 is to check the Material Safety Data Sheet (MSDS) that comes with all products containing hazardous materials (www.msdsonline.com for information). In addition, your national trade association or its local chapter might be able to help you.

Procedure (TCLP), or by simply knowing that your waste is hazardous or that your processes generate hazardous waste. For more information about the TCLP and other test methods, contact the RCRA Call Center or the Methods Information Communication Exchange (MICE) at 703 676-4690 or www.epa.gov/sw-846.

Identifying Your Waste

To help you identify some of the waste streams common to your business, consult the table on page 4 to find a list of typical hazardous wastes generated by small businesses. Use the insert in the middle of this handbook for a more detailed listing of the EPA waste codes associated with these waste streams to determine if your waste is hazardous. Commercial chemical products that are discarded might also become hazardous waste. For a complete listing of hazardous waste codes, see 40 CFR Part 261.

If your waste is hazardous, you will need to manage it according to appropriate federal regulations.

Finding Your Generator Category

Once you know that you generate hazardous waste, you

need to measure the amount of waste you produce per month. The amount of hazardous waste you generate determines your generator category.

Many hazardous wastes are liquids and are measured in gallons—not pounds. In order to measure your liquid wastes, you will need to convert from gallons to pounds. To do this, you must know the density of the liquid. A rough guide is that 30 gallons (about half of a 55-gallon drum) of waste with a density similar to water weighs about 220 pounds (100 kg); 300 gallons of a waste with a density similar to water weighs about 2,200 lbs (1,000 kg).

EPA has established three generator categories, as follows, each of which is regulated differently:

CESQGs:

Conditionally Exempt Small

Quantity Generators: You are considered a CESQG if you generate less than 220 lbs (100 kg) per month of hazardous waste. You are exempt from hazardous waste management regulations provided that you comply with the basic requirements described on page 6.

If you are a CESQG and you generate no more than 2.2 lbs (1 kg) of **acutely hazardous waste** (or 220

lbs (100 kg) of acutely hazardous waste spill residues) in a calendar month, and never store more than that amount for any period of time, you may manage the acutely hazardous waste according to the CESQG requirements. If you generate or store more than 2.2 lbs (1kg) of acutely hazardous waste on site, you must manage it according to the LQG requirements (see below).

SQGs:

Small Quantity Generators: You are considered an SQG if you generate between 220 and 2,200 lbs (100 and 1,000 kg) per month of hazardous waste. SQGs must comply with EPA requirements for managing hazardous waste described in this document.

LQGs:

Large Quantity Generators: You are considered an LQG if you generate more than 2,200 lbs (1,000 kg) per month of hazardous waste. LQGs must comply with more extensive hazardous waste rules than those summarized in this handbook. See page 21 for an overview.

TYPICAL HAZARDOUS WASTE GENERATED BY SMALL BUSINESSES

TYPE OF BUSINESS	HOW GENERATED	TYPICAL WASTES	WASTE CODES
Drycleaning and Laundry Plants	Commercial drycleaning processes	Still residues from solvent distillation, spent filter cartridges, cooked powder residue, spent solvents, unused perchloroethylene	D001, D039, F002, F005, U210
Furniture/Wood Manufacturing and Refinishing	Wood cleaning and wax removal, refinishing/stripping, staining, painting, finishing, brush cleaning and spray brush cleaning	Ignitable wastes, toxic wastes, solvent wastes, paint wastes	D001, F001-F005
Construction	Paint preparation and painting, carpentry and floor work, other specialty contracting activities, heavy construction, wrecking and demolition, vehicle and equipment maintenance for construction activities	Ignitable wastes, toxic wastes, solvent wastes, paint wastes, used oil, acids/bases	D001, D002, F001-F005
Laboratories	Diagnostic and other laboratory testing	Spent solvents, unused reagents, reaction products, testing samples, contaminated materials	D001, D002, D003, F001-F005, U211
Vehicle Maintenance	Degreasing, rust removal, paint preparation, spray booth, spray guns, brush cleaning, paint removal, tank cleanout, installing lead-acid batteries, oil and fluid replacement	Acids/bases, solvents, ignitable wastes, toxic wastes, paint wastes, batteries, used oil, unused cleaning chemicals	D001, D002, D006, D007, D008, D035, F001-F005, U002, U080, U134, U154, U159, U161, U220, U228, U239
Printing and Allied Industries	Plate preparation, stencil preparation for screen printing, photoprocessing, printing, cleanup	Acids/bases, heavy metal wastes, solvents, toxic wastes, ink, unused chemicals	D002, D006, D008, D011, D019, D035, D039, D040, D043, F001-F005, U002, U019, U043, U055, U056, U069, U080, U112, U122, U154, U159, U161, U210, U211, U220, U223, U226, U228, U239, U259, U359
Equipment Repair	Degreasing, equipment cleaning, rust removal, paint preparation, painting, paint removal, spray booth, spray guns, and brush cleaning.	Acids/bases, toxic wastes, ignitable wastes, paint wastes, solvents	D001, D002, D006, D008, F001-F005
Pesticide End-Users/Application Services	Pesticide application and cleanup	Used/unused pesticides, solvent wastes, ignitable wastes, contaminated soil (from spills), contaminated rinsewater, empty containers	D001, F001-F005, U129, U136, P094, P123
Educational and Vocational Shops	Automobile engine and body repair, metalworking, graphic arts-plate preparation, woodworking	Ignitable wastes, solvent wastes, acids/bases, paint wastes	D001, D002, F001-F005
Photo Processing	Processing and developing negatives/prints, stabilization system cleaning	Acid regenerants, cleaners, ignitable wastes, silver	D001, D002, D007, D011
Leather Manufacturing	Hair removal, bating, soaking, tanning, buffing, and dyeing	Acids/bases, ignitable wastes, toxic wastes, solvent wastes, unused chemicals	D001, D002, D003, D007, D035, F001-F005, U159, U228, U220

TIP

In many cases, small businesses that fall into different generator categories at different times choose to satisfy the more stringent requirements to simplify compliance.

UNIVERSAL WASTES

The Universal Waste Rule was written to streamline environmental regulations for wastes generated by large numbers of businesses in relatively small quantities. It is designed to reduce the amount of hazardous waste disposed of in municipal solid waste, encourage the recycling and proper disposal of certain common hazardous wastes, and reduce the regulatory burden for businesses that generate these wastes.

Universal wastes are items commonly thrown into the trash by households and small businesses. Although handlers of universal wastes can meet less stringent standards for storing, transporting, and collecting these wastes, handlers must still comply with the full hazardous waste requirements for final recycling, treatment, or disposal. By providing a waste management structure that removes these wastes from municipal landfills and incinerators, this rule ensures stronger safeguards for public health and the environment.

Universal wastes include:

- ▶▶ Batteries, such as nickel-cadmium (Ni-Cd) and small sealed lead-acid batteries, which are found in many common items, including electronic equipment, cell phones, portable computers, and emergency backup lighting.

- ▶▶ Agricultural pesticides that have been recalled or banned from use, are obsolete, have become damaged, or are no longer needed due to changes in cropping patterns or other factors. They often are stored for long periods of time in sheds or barns.
- ▶▶ Thermostats, which can contain as much as 3 grams of liquid mercury and are located in almost any building, including commercial, industrial, agricultural, community, and household buildings.
- ▶▶ Lamps, which typically contain mercury and sometimes lead, and are found in businesses and households. Examples include fluorescent, high-intensity discharge (HID), neon, mercury vapor, high-pressure sodium, and metal halide lamps.

Materials are continually added to the Universal Waste list; check www.epa.gov/epaoswer/hazwaste/id/univwast.htm for the latest information.

The Universal Waste Rule also encourages communities and businesses to establish collection programs or participate in manufacturer take-back programs required by a number of states. Many large manufacturers and trade associations are already planning national and regional collection programs for their universal waste products.

For more information, see 40 CFR Part 273.

WHAT IS YOUR GENERATOR CATEGORY?

Depending on your type of business, you might be regulated under different rules at different times. If, for example, you generate less than 220 lbs (100 kg) of hazardous waste during the month of June, you would be considered a CESQG for June, and your June waste would be subject to the hazardous waste management requirements for CESQGs. If, in July, you generate between 220 and 2,200 lbs (100 kg to 1,000 kg) of hazardous waste, your generator status would change, and you would be considered an SQG for July. Your July waste would then be subject to the management requirements for SQGs. If you mix the wastes generated during June and July, the entire mixture would be subject to the more stringent SQG standards.

WHAT DO YOU MEASURE TO DETERMINE YOUR GENERATOR CATEGORY?

DO Measure:

All quantities of listed and characteristic hazardous wastes that are:

- ▶▶ Accumulated on the property for any period of time before disposal or recycling. (Drycleaners, for example, must count any residue removed from machines, as well as spent cartridge filters.)
- ▶▶ Packaged and transported away from your business.
- ▶▶ Placed directly in a regulated treatment or disposal unit at your place of business.
- ▶▶ Generated as still bottoms or sludges and removed from product storage tanks.

DO NOT Measure:

Wastes that:

- ▶▶ Are specifically exempted from counting. Examples include lead-acid batteries that will be reclaimed, scrap metal that will be recycled, used oil managed under the used oil provisions of 40 CFR 279, and universal wastes (e.g., batteries, pesticides, thermostats, and lamps) managed under 40 CFR 273.
- ▶▶ Might be left in the bottom of containers that have been thoroughly emptied through conventional means such as pouring or pumping.
- ▶▶ Are left as residue in the bottom of tanks storing products, if the residue is not removed from the product tank.
- ▶▶ Are reclaimed continuously on site without storing prior to reclamation, such as drycleaning solvents.
- ▶▶ Are managed in an "elementary neutralization unit," a "totally enclosed treatment unit," or a "wastewater treatment unit," without being stored first. (See Definitions for an explanation of these types of units.)
- ▶▶ Are discharged directly to publicly owned treatment works (POTWs) without being stored or accumulated first. This discharge to a POTW

must comply with the Clean Water Act. POTWs are public utilities, usually owned by the city, county, or state, that treat industrial and domestic sewage for disposal.

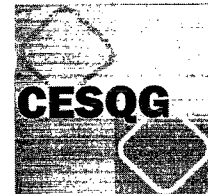
- ▶▶ Have already been counted once during the calendar month, and are treated on site or reclaimed in some manner, and used again.
- ▶▶ Are regulated under the universal waste rule or have other special requirements. The federal regulations contain special, limited requirements for managing certain commonly generated wastes. These wastes can be managed following the less burdensome requirements listed below instead of the usual hazardous waste requirements. Check with your state agency to determine if your state has similar regulations.

Used oil—40 CFR Part 279

Lead-acid batteries that are reclaimed—40 CFR Part 266, Subpart G

Scrap metal that is recycled—40 CFR 261.6 (a)(3)

Universal wastes (e.g., certain batteries, recalled and collected pesticides, and mercury-containing thermostats and lamps)—40 CFR Part 273



OVERVIEW OF REQUIREMENTS FOR CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS

If you generate no more than 220 lbs (100 kg) of hazardous waste per month, you are a Conditionally Exempt Small Quantity Generator (CESQG). You must comply with three basic waste management requirements to remain exempt from the full hazardous waste regulations that apply to generators of larger quantities (SQGs and LQGs).

(Note: there are different quantity limits for acutely hazardous waste.)

First, you must identify all hazardous waste that you generate. Second, you may not store more than 2,200 lbs (1,000 kg) of hazardous waste on site at any

time. Finally, you must ensure delivery of your hazardous waste to an off-site treatment or disposal facility that is one of the following, or, if you treat or dispose of your hazardous waste on site, your facility also must be:

- ▶▶ A state or federally regulated hazardous waste management treatment, storage, or disposal facility.
- ▶▶ A facility permitted, licensed, or registered by a state to manage municipal or industrial solid waste.
- ▶▶ A facility that uses, reuses, or legitimately recycles the waste (or treats the waste prior to use, reuse, or recycling).
- ▶▶ A universal waste handler or destination facility subject to the universal waste requirements of 40 CFR Part 273. (Universal wastes are wastes

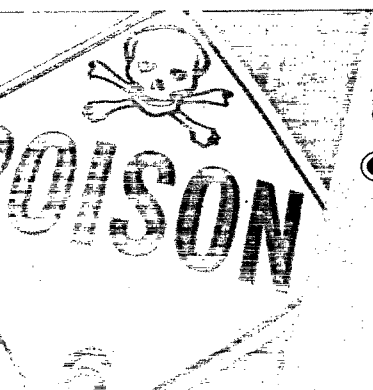
such as certain batteries, recalled and collected pesticides, or mercury-containing thermostats or lamps.)

STATE REQUIREMENTS

Some states have additional requirements for CESQGs. For example, some states require CESQGs to follow some of the SQG requirements such as obtaining an EPA identification number, or complying with storage standards. See page 14 for SQG storage requirements.

Suggestion:

It's a good idea to call the appropriate state agency to verify that the treatment, storage, and disposal facility (TSDF) you have selected has any necessary permits, etc. You also may want to see that the facility fits into one of the above categories. (It's a good idea to document such calls for your records.)



- Identify your hazardous waste.
- Comply with storage quantity limits.
- Ensure proper treatment and disposal of your waste.

OBTAINING AN EPA IDENTIFICATION NUMBER

If your business generates between 220 lbs (100 kg) and 2,200 lbs (1,000 kg) of hazardous waste per month, you are an SQG, and you must obtain and use an EPA identification number. EPA and states use these 12-character numbers to monitor and track hazardous waste activities. You will need to use your identification number when you send waste off site to be managed.

To obtain an EPA identification number, you should:

- ▶▶ Call or write your state hazardous waste management agency or the hazardous waste division of your EPA Regional office and ask for a copy of EPA Form 8700-12, "Notification of Hazardous Waste Activity" (EPA Regional

offices are listed on pages 24 or visit <www.epa.gov/epaoswer/hazwaste/data/form8700/forms.htm>). You will be sent a booklet that contains a form with instructions and those portions of the regulations that will help you identify your waste. A sample copy of a completed notification form is shown on pages 9-10. (Note: A few states use a form that is different from the one shown. Your state agency will send you the appropriate form to complete.)

- ▶▶ Fill in the form as shown in the example. To complete Item IX of the form, you will need to identify your hazardous waste by its EPA Hazardous Waste Code. A list of common hazardous wastes and their waste codes can be found on the insert in this handbook; for a complete list of waste codes, you should consult 40 CFR Part 261, or contact your state or regional EPA office or the RCRA Call Center. The form you receive from your state might contain an additional sheet that provides more space for waste codes. Complete one

copy of the form for each business site where you generate or handle hazardous waste. Each site will receive its own EPA identification number. Make sure you sign the certification in Item X.

- ▶▶ Send the completed form to your state hazardous waste contact. This address is listed in the information booklet that you will receive with the form.

EPA records the information on the form and assigns an EPA identification number to the site identified on your form. The EPA number stays with the property when ownership changes. If you move your business, you must notify EPA or the state of your new location and submit a new form. If another business previously handled hazardous waste at this location and obtained an EPA Identification Number, you will be assigned the same number after you have notified EPA that you have moved to this location. Otherwise, EPA will assign you a new identification number.


- Call your state agency to determine if you need an EPA identification number.
- If you do, obtain a copy of EPA Form 8700-12.
- Fill in the form completely.
- Send the form to your STATE hazardous waste contact.



SAMPLE "NOTIFICATION OF REGULATED WASTE ACTIVITY" FORM

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

GSA No. 0246-EPA-OT

<small>Please refer to Section V. Line-by-Line Instructions for Completing EPA Form 8700-12 before completing this form. The information requested here is required by law (Section 3010 of the Resource Conservation and Recovery Act).</small>		Notification of Regulated Waste Activity		Date Received (For Official Use Only)	
 EPA United States Environmental Protection Agency					
I. Installation's EPA ID Number (Mark 'X' in the appropriate box)					
<input checked="" type="checkbox"/> A. Initial Notification		<input type="checkbox"/> B. Subsequent Notification (Complete Item C)		C. Installation's EPA ID Number	
II. Name of Installation (Include company and specific site name)					
General Metal Processing Co					
III. Location of Installation (Physical address not P.O. Box or Route Number)					
Street					
501 Main Street					
Street (Continued)					
City or Town				State	Zip Code
Smalltown				VA	23000-
County Code		County Name			
IV. Installation Mailing Address (See instructions)					
Street or P.O. Box					
501 Main Street					
City or Town				State	Zip Code
Smalltown				VA	23000-
V. Installation Contact (Person to be contacted regarding waste activities at site)					
Name (Last)			(First)		
Jones			William		
Job Title			Phone Number (Area Code and Number)		
Manager			804-555-1234		
VI. Installation Contact Address (See instructions)					
A. Contact Address Location		B. Street or P.O. Box			
<input checked="" type="checkbox"/> Location		501 Main Street			
<input type="checkbox"/> Mailing					
City or Town				State	Zip Code
Smalltown				VA	23000-
VII. Ownership (See instructions)					
A. Name of Installation's Legal Owner					
Josephine Doe					
Street, P.O. Box, or Route Number					
234 Broad Street					
City or Town				State	Zip Code
Smalltown				VA	23000-
Phone Number (Area Code and Number)		B. Land Type	C. Owner Type	D. Change of Owner Indicator	Date Changed
804-555-6789				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Month Day Year

SAMPLE "NOTIFICATION OF REGULATED WASTE ACTIVITY" FORM (CONTINUED)

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0028 Expires 12/31/02
GSA No. 0246-EPA-OT

ID - For Official Use Only

VIII. Type of Regulated Waste Activity (Mark 'X' in the appropriate boxes. Refer to Instructions)

A. Hazardous Waste Activities

1. Generator (See Instructions)
 - ☐ a. Greater than 1000kg/mo (2,200 lbs.)
 - ☒ b. 100 to 1000 kg/mo (220-2,200 lbs.)
 - ☐ c. Less than 100 kg/mo (220 lbs.)
2. Transporter (Indicate Mode in boxes 1-5 below)
 - ☐ a. For own waste only
 - ☐ b. For commercial purposes
- Mode of Transportation
 - ☐ 1. Air
 - ☐ 2. Rail
 - ☐ 3. Highway
 - ☐ 4. Water
 - ☐ 5. Other - specify _____
3. Treater, Storer, Disposer (at installation) Note: A permit is required for this activity, see instructions.
4. Exempt Boiler and/or Industrial Furnace
 - ☐ a. Smelting, Melting, and Refining Furnace Exemption
 - ☐ b. Small Quantity On-Site Burner Exemption
5. Underground Injection Control

C. Used Oil Management Activities

1. Used Oil Transporter/Transfer Facility - Indicate Type(s) of Activity(ies)
 - ☐ a. Transporter
 - ☐ b. Transfer Facility
2. Used Oil Processor/Re-refiner - Indicate Type(s) of Activity(ies)
 - ☐ a. Processor
 - ☐ b. Re-refiner
3. Off-Specification Used Oil Burner
4. Used Oil Fuel Marketer
 - ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Used Oil Burner
 - ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

B. Universal Waste Activity

- ☐ Large Quantity Handler of Universal Waste

IX. Description of Hazardous Wastes (Use additional sheets if necessary)

A. Listed Hazardous Wastes. (See 40 CFR 261.31 - 33; See Instructions if you need to list more than 12 waste codes.)

1 F008	2 F011	3 K009	4	5	6
7	8	9	10	11	12

B. Characteristics of Nonlisted Hazardous Wastes. (Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles; See 40 CFR Parts 261.20 - 261.24; See instructions if you need to list more than 4 toxicity characteristic waste codes.)

(List specific EPA hazardous waste number(s) for the Toxicity Characteristic contaminant(s))

1. Ignitable (D001)	2. Corrosive (D002)	3. Reactive (D003)	4. Toxicity Characteristic
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C. Other Wastes. (State-regulated or other wastes requiring a handler to have an I.D. number; See Instructions.)

1	2	3	4	5	6
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X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature <i>Josephine Doe</i>	Name and Official Title (Type or print) Josephine Doe, owner	Date Signed 12-01-00
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XI. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (See Section IV of the booklet for addresses.)

TIP

It is a good practice never to mix wastes. Mixing wastes can create an unsafe work environment and lead to complex and expensive cleanups and disposal.

SQG

MANAGING HAZARDOUS WASTE ON SITE

Most small businesses accumulate some hazardous waste on site for a short period of time and then ship it off site to a treatment, storage, or disposal facility (TSDF).

Accumulating Your Waste

Accumulating hazardous waste on site can pose a threat to human health and the environment, so you may keep it only for a short time without a permit. Before shipping the waste for disposal or recycling, you are responsible for its safe management, which includes safe storage, safe treatment, preventing accidents, and responding to emergencies in accordance with federal regulations.

SQGs can accumulate no more than 13,228 lbs (6,000 kg) of hazardous waste on site for up to 180 days without a permit. You can accumulate this amount of waste for up to 270 days if you must transport it more than 200 miles away for recovery, treatment, or

disposal. Limited extensions may be granted by the state director or the regional EPA administrator. If you exceed these limits, you are considered a TSDF and must obtain an operating permit. Wastes generated in small amounts throughout your facility may be stored in satellite accumulation areas located at or near the point of generation of the waste. The total amount of waste that may be accumulated at a satellite area is limited to 55 gallons. Once this quantity has been exceeded, you have 3 days to transfer the waste to your designated 180-day (or 270-day) storage area.

(Note: Different quantity limits apply to acutely hazardous wastes.)

SQGs must accumulate waste in tanks or containers, such as 55-gallon drums. Your storage tanks and containers must be managed according to EPA requirements summarized below:

For containers, you must:

- ▶▶ Use a container made of, or lined with, a material that is compatible with the hazardous waste to be stored. (This will prevent the waste from reacting with or corroding the container.)
 - ▶▶ Keep all containers holding hazardous waste closed during storage, except when adding or removing waste. Do not open, handle, or store (e.g., stack) containers in a way that might rupture them, cause them to leak, or otherwise fail.
 - ▶▶ Inspect areas where containers are stored at least weekly. Look for leaks and for deterioration caused by corrosion or other factors.
 - ▶▶ Maintain the containers in good condition. If a container leaks, put the hazardous waste in another container, or contain it in some other way that complies with EPA regulations.
 - ▶▶ Do not mix incompatible wastes or materials unless precautions are taken to prevent certain hazards.
- ▶▶ Label each container with the words "HAZARDOUS WASTE" and the date that the waste was generated.

● Accumulate wastes according to limits established by EPA for SQGs.

● Follow the storage and handling procedures required by EPA for SQGs.

● Follow EPA requirements for equipment testing and maintenance, access to communications or alarms, aisle space, and emergency arrangements with local authorities.

WASTE MINIMIZATION: THE KEY TO BETTER WASTE MANAGEMENT

The easiest and most cost-effective way of managing any waste is not to generate it in the first place. You can decrease the amount of hazardous waste your business produces by developing a few "good housekeeping" habits. Good housekeeping procedures generally save businesses money, and they prevent accidents and waste. To help reduce the amount of waste you generate, try the following practices at your business.

►► **Do not mix wastes.** Do not mix nonhazardous waste with hazardous waste. Once you mix anything with listed hazardous waste, the whole batch becomes hazardous. Mixing waste can also make recycling very difficult, if not impossible. A typical example of mixing wastes would be putting nonhazardous cleaning agents in a container of used hazardous solvents.

►► **Change materials, processes, or both.** Businesses can save money and increase efficiency by replacing a material or a process with another that produces less waste. For example, you could use plastic blast media for paint stripping of metal parts rather than conventional solvent stripping.

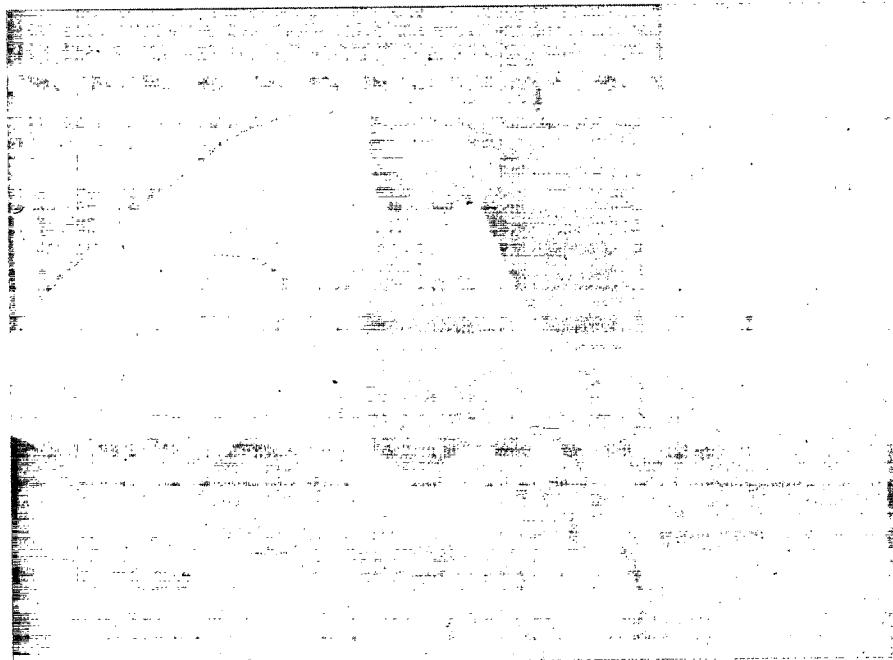
►► **Recycle and reuse manufacturing materials.** Many companies routinely put useful components back into productive use rather than disposing of them. Items such as oil, solvents, acids, and metals are commonly recycled and used again. In addition, some companies have

taken waste minimization actions such as using fewer solvents to do the same job, using solvents that are less toxic, or switching to a detergent solution.

►► **Safely store hazardous products and containers.** You can avoid creating more hazardous waste by preventing spills or leaks. Store hazardous product and waste containers in secure areas, and inspect them frequently for leaks. When leaks or spills occur, materials used to clean them also become hazardous waste.

►► **Make a good faith effort.** SQGs do not have to document their waste minimization activities or create a waste minimization plan. You do, however, need to certify on your manifests that you have made a good faith effort to minimize waste generation when you send your waste off site.





For tanks, you must:

- ▶▶ Label each tank with the words "HAZARDOUS WASTE" and the date that the waste was generated.
- ▶▶ Store only waste that will not cause the tank or the inner liner of the tank to rupture, leak, corrode, or fail.
- ▶▶ Equip tanks that have an automatic waste feed with a waste feed cutoff system, or a bypass system for use in the event of a leak or overflow.
- ▶▶ Inspect discharge control and monitoring equipment and the level of waste in uncovered tanks at least once each operating day. Inspect the tanks and surrounding areas for leaks or other problems (such as corrosion) at least weekly.
- ▶▶ Use the National Fire Protection Association's (NFPA's) buffer zone requirements for covered tanks containing ignitable or reactive wastes. These requirements specify distances considered to be safe buffer zones for various ignitable or reactive wastes. You can reach the NFPA at 617 770-3000.
- ▶▶ Do not mix incompatible wastes or materials unless precautions are taken to prevent certain hazards.
- ▶▶ Do not place ignitable or reactive wastes in tanks unless certain precautions are taken.
- ▶▶ Provide at least 2 feet (60 centimeters) of freeboard (space at the top of each tank) in uncovered tanks, unless the tank is equipped

with a containment structure, a drainage control system, or a standby tank with adequate capacity.

Treating Your Waste to Meet the Land Disposal Restrictions (LDRs)

Most hazardous wastes may not be land disposed unless they meet "treatment standards." The Land Disposal Restrictions (LDR) program requires that the waste is treated to reduce the hazardous constituents to levels set by EPA, or that the waste is treated using a specific technology. It is your responsibility to ensure that your waste is treated to meet LDR treatment standards before it is land disposed. (See page 17 for a description of required LDR notices.) Most SQGs probably will have their designated TSDF do this treatment. If you choose to treat your waste yourself to meet LDR treatment standards, there are additional requirements including waste analysis plans, notifications, and certifications. To learn about these requirements, contact the RCRA Call Center, your state agency, or EPA regional office, and consult 40 CFR Part 268.

Preventing Accidents

Whenever you store hazardous waste on site, you must minimize the potential risks from fires, explosions, or other accidents.

All SQGs that store hazardous waste on site must be equipped with:

- ▶▶ An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to all personnel.
- ▶▶ A device, such as a telephone (immediately available at the scene of operations) or a hand-held, two-way radio, capable of summoning emergency assistance from local police and fire departments or emergency response teams.
- ▶▶ Portable fire extinguishers, fire-control devices (including special extinguishing equipment, such as those using foam, inert gas, or dry chemicals), spill-control materials, and decontamination supplies.
- ▶▶ Water at adequate volume and pressure to supply water-hose streams, foam-producing equipment, automatic sprinklers, or water spray systems.

You must test and maintain all equipment to ensure proper operation. Allow sufficient aisle space to permit the unobstructed movement of personnel, fire protection equipment, spill-control equipment, and decontamination equipment to any area of facility operation. Attempt to secure arrangements with fire departments, police, emergency response teams, equipment suppli-

IF YOU THINK YOU HAVE AN EMERGENCY, IMMEDIATELY CALL 911 AND THE NATIONAL RESPONSE CENTER AT 800 424-8802.

In the event of a fire, explosion, or other release of hazardous waste that could threaten human health outside the facility, or if you think that a spill has reached surface water, call the National Response Center to report the emergency. The Response Center will evaluate

the situation and help you make appropriate emergency decisions. In many cases, you will find that the problem you faced was not a true emergency, but **it is better to call if you are not sure.** Serious penalties exist for failing to report emergencies.

ers, and local hospitals, as appropriate, to provide services in the event of an emergency. Ensure that personnel handling hazardous waste have immediate access to an alarm or emergency communications device.

You are not required to have a formal personnel training program, but you must ensure that employees handling hazardous waste are familiar with proper handling and emergency procedures. In addition, you must have an emergency coordinator on the premises or on-call at all times, and have basic facility safety information readily accessible.

Responding to Emergencies

Although EPA does not require SQGs to have a written contingency plan, you must be prepared for an emergency at your facility. You should also be prepared to answer a set of "what if" questions. For example: "What if there is a fire in the area where haz-

ardous waste is stored?" or "What if I spill hazardous waste, or one of my hazardous waste containers leaks?" In case of a fire, explosion, or toxic release, having such a plan provides an organized and coordinated course of action. SQGs are required to establish basic safety guidelines and response procedures to follow in the event of an emergency.

Worksheets 1 and 2 (on page 15) can help you set up these procedures. The information on Worksheet 1 must be posted near your phone. You must ensure that employees are familiar with these procedures.

Hazardous Waste Code Chart

Pull out and post for quick reference

Solvents:

Solvents, spent solvents, solvent mixtures, or solvent still bottoms are often hazardous. The following are some commonly used hazardous solvents (also see Ignitable wastes for other hazardous solvents, and 40 CFR 261.31 for most listed hazardous waste solvents):

Benzene	F005	Toluene	F005
Carbon Disulfide	F005	Trichloroethylene	F001, F002
Carbon Tetrachloride	F001	Trichlorofluoromethane	F002
Chlorobenzene	F002	Trichlorotrifluoroethane	F002
Cresols	F004	(Valclene)	
Cresylic Acid	F004	White Spirits	D001
O-Dichlorobenzene	F002		
Ethanol	D001		
2-Ethoxyethanol	F005		
Ethylene Dichloride	D001		
Isobutanol	F005		
Isopropanol	D001		
Kerosene	D001		
Methyl Ethyl Ketone	F005		
Methylene Chloride	F001, F002		
Naphtha	D001		
Nitrobenzene	F004		
2-Nitrobenzene	F004		
Petroleum Solvents	D001		
(Flashpoint less than 140°F)			
Pyridine	F005		
1,1,1-Trichloroethane	F001, F002		
1,1,2-Trichloroethane	F002		
Tetrachloroethylene	F001, F002		
(Perchloroethylene)			

Acids:

Acids, bases, or mixtures having a pH less than or equal to 2 or greater than or equal to 12.5 are considered corrosive (for a complete description of corrosive wastes, see 40 CFR 261.22). All corrosive materials and solutions have the waste code **D002**. The following are some of the more commonly used corrosives:

Ignitable Wastes:

Ignitable wastes are any liquids that have a flashpoint less than 140°F; any non-liquids that are capable of causing a fire through friction, absorption of moisture, or spontaneous chemical change that creates a hazard when ignited; or any ignitable compressed gas as described in 49 CFR 173.300 (for a complete description of ignitable wastes, see 40 CFR 261.21). Examples are spent solvents, solvent still bottoms, epoxy resins and adhesives, and waste inks containing flammable solvents. Unless otherwise specified, all ignitable wastes have the waste code **D001**.

Acetone	F003	Chlorobenzene	F002
Benzene	F005	Cyclohexanone	F003
n-Butyl Alcohol	F003	Ethyl Acetate	F003
Ethyl Benzene	F003	Ethyl Ether	F003
		Ethylene Dichloride	D001
		Methanol	F003
		Methyl Isobutyl Ketone	F003
		Petroleum Distillates	D001
		Xylene	F003

EPA Hazardous Waste Codes for Waste Streams Commonly Generated by Small Quantity Generators

This list can be used as a guide for small quantity generators to determine which of their wastes, if any, are hazardous, and to determine the EPA waste codes associated with each waste. It is not intended to provide a comprehensive

Lead-Acid Batteries:

Used lead-acid batteries should be reported on the notification form only if they are not recycled. Used lead-acid batteries that are recycled do not need to be counted in determining the quantity of waste that you generate per month. Special requirements do apply if you recycle your batteries on your own premises (see 40 CFR Part 266).

Lead Dross	D008
Spent Acids	D002
Lead-Acid Batteries	D008

Pesticides:

The pesticides listed below are hazardous. Wastes marked with an asterisk (*) have been designated acutely hazardous. For a more complete listing, see 40 CFR 261.32 for specific listed pesticides, and other wastes, wastewaters, sludges, and byproducts from pesticide formulators.

*Aldicarb	P070
Amitrole	U011
Endrin	D012

Chromic Acid
 Hydrobromic Acid
 Hydrochloric Acid
 Hydrofluoric Acid
 Nitric Acid
 Perchloric Acid
 Phosphoric Acid
 Potassium Hydroxide
 Sodium Hydroxide
 Sulfuric Acid

for commercial chemical products that are hazardous when discarded unused. These wastes, as well as all others not listed here, can be found in Title 40 of the Code of Federal Regulations (40 CFR) Part 261 (www.epa.gov/epacfr40). If you have any questions, contact your state agency or the RCRA Call Center at 703 412-9810 or TDD 703 412-3323 in the Washington, DC, area or at 800 424-9346 or TDD 800 533-7672 from other locations.

Lindane U129, D013
 Methoxychlor D014
 *Methyl Parathion P071
 *Parathion P089
 *Phorate P094
 Toxaphene D015
 Silvex D017

Drycleaning Filtration

Residues:

Cooked powder residue (perchloroethylene plants only), still residues, and spent cartridge filters containing perchloroethylene or valclore are hazardous and have the waste code **F002**. Still residues containing petroleum solvents with a flashpoint less than 140°F are considered hazardous and have the waste code **D001**.

Heavy Metals/Inorganics:

Hheavy metals and other inorganic waste materials are considered hazardous if the extract from a representative sample of the waste has any of the specific constituents concentrations as shown in 40 CFR 262.24, Table 1. Materials may include dusts, solutions, wastewater treatment sludges, paint wastes, and waste inks. The following are common heavy metals/inorganics:

Arsenic	D004	Lead	D008
Barium	D005	Mercury	D009
Cadmium	D006	Selenium	D010
Chromium	D007	Silver	D011

Ink Sludges Containing Chromium and Lead:

This category includes solvent washes and sludges, caustic washes and sludges, and water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead. All ink sludges have the waste code **K086**.

Reactives:

Reactive wastes include materials or mixtures that are unstable, react violently with or form explosive mixtures with water, generate toxic gases or vapors when mixed

with water (or when exposed to pH conditions between 2 and 12.5 in the case of cyanide or sulfide bearing wastes), or are capable of detonation or explosive reaction when heated or subject to shock (for a complete description of reactive wastes, see 40 CFR 261.23). Unless otherwise specified, all reactive wastes have the waste code **D003**. The following materials are commonly considered to be reactive:

Acetyl Chloride	Cyanides	Organic Peroxides	Permanganates
Chromic Acid	Hypochlorites	Perchlorates	Sulfides

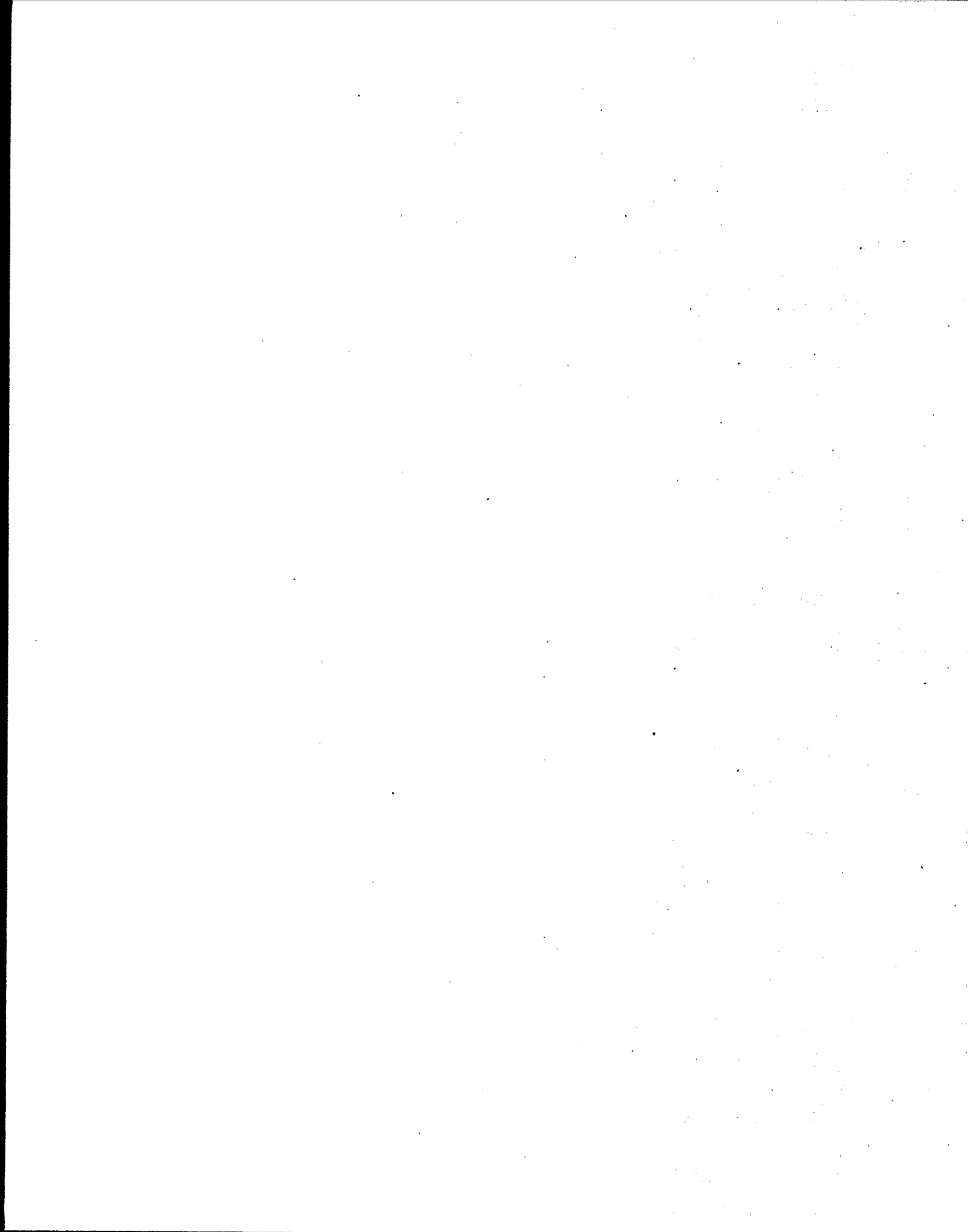
Spent Plating and Cyanide Wastes:

Spent plating wastes contain cleaning solutions and plating solutions with caustics, solvents, heavy metals, and cyanides. Cyanide wastes may also be generated from heat treatment operations, pigment production, and manufacturing of anticaking agents. Plating wastes generally have the waste codes **F006-F009**. Cyanide heat treating wastes generally have the waste codes **F010-F012** (see 40 CFR 261.31 for a more complete description of plating wastes).

Wood Preserving Agents:

Wastewaters, process residuals, and spent formulations from wood preserving processes that contain chlorophenolic or creosote formulations, or certain inorganic preservatives are considered hazardous and have the waste codes **F032**, **F034**, and **F035**, respectively. Wood preserving solutions that are recycled are not subject to hazardous waste regulations. Bottom sediment sludges from the treatment of wastewater processes that use creosote and pentachlorophenol have the waste code **K001**. In addition, unless otherwise indicated, specific wood preserving compounds are:

Chromated Copper Arsenate	D004	Pentachlorophenol	F027
Creosote	U051		





Worksheet 1 Fill in and post this information next to your telephone.

EMERGENCY RESPONSE INFORMATION

Emergency Coordinator

Name: _____

Telephone: _____

Fire Extinguisher

Location(s): _____

Spill-Control Materials

Location(s): _____

Fire Alarm (if present)

Location(s): _____

Fire Department

Telephone: _____



Worksheet 2 Fill in and post this information next to your telephone. Make sure all employees read and are familiar with its contents.

EMERGENCY RESPONSE PROCEDURES

In the event of a spill:

Contain the flow of hazardous waste to the extent possible, and as soon as is possible, clean up the hazardous waste and any contaminated materials or soil.

In the event of a fire:

Call the fire department and, if safe, attempt to extinguish the fire using a fire extinguisher.

In the event of a fire, explosion, or other release that could threaten human health outside the facility, or if you know that the spill has reached surface water:

Call the National Response Center at its 24-hour number (800 424-8802). Provide the following information:

Our company name: _____

Our address: _____

Our U.S. EPA identification number: _____

Date of accident: _____

Time of accident: _____

Type of accident (e.g., spill or fire) _____

Quantity of hazardous waste involved _____

Extent of injuries, if any _____

Estimated quantity and disposition of recovered materials, if any



SHIPPING WASTE OFF SITE

When shipping waste off site, SQGs must follow certain procedures that are designed to ensure safe transport and proper management of the waste.

Selecting a Treatment, Storage, and Disposal Facility (TSDF)

SQGs may send their waste only to a regulated Treatment, Storage, and Disposal Facility (TSDF) or recycler. Most regulated TSDFs and recyclers will have a permit from the state or EPA. Some, however, may operate under other regulations that do not require a permit. Check with the appropriate state authorities to be sure the facility you select has any

necessary permits. All TSDFs and recyclers must have EPA identification numbers.

Labeling Waste Shipments

SQGs must properly package, label, and mark all hazardous waste shipments, and placard the vehicles in which these wastes are shipped following Department of Transportation (DOT) regulations. Most small businesses use a commercial transporter to ship hazardous waste. These transporters can advise you on specific requirements for placarding, labeling, marking, and packaging; however, you remain responsible for compliance. For additional information, consult the DOT regulations (49 CFR Parts 172 and 173) or call the DOT hazardous materials information line at 202 366-4488 or 800 467-4922.

Federal regulations allow you to transport your own hazardous waste to a designated TSDF provided that you comply with DOT rules. Some states, however, do not allow this practice. Call DOT and your state hazardous waste management agency regarding applicable regulations.

- Package, label, and mark your shipment, and placard the vehicle in which your waste is shipped as specified in DOT regulations.
- Prepare a hazardous waste manifest to accompany your shipment.
- Include a notice and certification with the first waste shipment.
- Ensure the proper management of any hazardous waste you ship (even when it is no longer in your possession).



Preparing Hazardous Waste Manifests

The Hazardous Waste Manifest System is a set of forms, reports, and procedures designed to seamlessly track hazardous waste from the time it leaves the generator until it reaches the off-site waste management facility that will store, treat, or dispose of the hazardous waste. The system allows the waste generator to verify that its waste has been properly delivered and that no waste has been lost or unaccounted for in the process.

The key component of this system is the Uniform Hazardous Waste Manifest, which is a multipart form prepared by most generators that transport hazardous waste for off-site treatment, recycling, storage, or disposal. The manifest is required by both the DOT and EPA. When completed, it contains infor-

mation on the type and quantity of the waste being transported, instructions for handling the waste, and signatures of all parties involved in the off-site treatments, recycling, storage, or disposal process. Each party also must retain a copy of the manifest. This process ensures critical accountability in the transportation and disposal process. Once the waste reaches its destination, the receiving facility returns a signed copy of the manifest to the generator, confirming that the waste has been received.

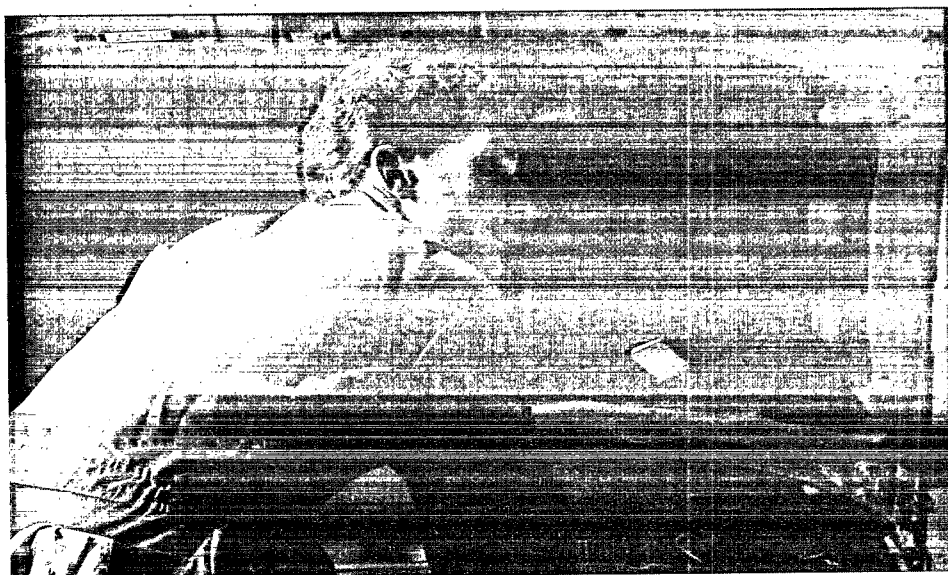
At press time, the Uniform Hazardous Waste Manifest system is in the process of being updated and modernized. Please check the Internet at www.epa.gov/epaoswer/hazwaste/gener/manifest/index.htm.

EPA expects to standardize the content and appearance of the cur-

rent manifest form so that the same form may be used by waste handlers nationwide. Other anticipated changes include improved tracking procedures and an option to complete, send, and store the manifest information electronically.

Land Disposal Restrictions (LDR) Reporting Requirements

Regardless of where the waste is being sent, the initial shipment of waste subject to LDRs must be sent to a receiving TSDF or recycler along with an LDR notice. You must send an additional LDR notice if your waste or receiving facility changes. This notice must provide information about your waste, such as the EPA hazardous waste code and the LDR treatment standard. The purpose of this notice is to let the TSDF know that the waste must



meet treatment standards before it is land disposed. There is no required form for this notice, but your TSDf may provide a form for you to use. A certification may also be required in specific situations. Contact the RCRA Call Center, your state agency, or EPA regional office and consult 40 CFR Part 268 for help with LDR notification and certification requirements.

Export Notification

If you choose to export your hazardous waste, you must notify EPA 60 days before the intended date of shipment to obtain written consent. EPA's "Acknowledgment of Consent" document must accompany the shipment at all times. For more information on how to obtain the consent to export hazardous waste, contact the RCRA Call Center at 800 424-9346.

Closure

When you close your facility, you must ensure that all hazardous waste has been removed from your hazardous waste tanks, discharge-control equipment, and discharge confinement structures. In addition, any contamination you might have caused must be cleaned up and managed under all applicable hazardous waste regulations.





MANAGING USED OIL

EPA's used oil management standards are a set of "good house-keeping" requirements that encourage used oil handlers to recycle used oil instead of disposing of it. Used oil can be collected, refined and recycled, and used again—for the same job or a completely different task.

Used oil is defined as "any oil that has been refined from crude oil or any synthetic oil that has been used and, as a result of such use, is contaminated by physical or chemical impurities." To meet EPA's definition of used oil, a substance must meet each of the following criteria:

- ▶▶ **Origin.** Used oil must have been refined from crude oil or made from synthetic materials. Animal and vegetable oils are excluded from EPA's definition of used oil.
- ▶▶ **Use.** Oils used as lubricants, hydraulic fluids, head transfer fluids, buoyants, and for other similar purposes are considered used oil. Unused oil such as bottom clean-out waste from virgin fuel oil storage tanks or virgin fuel oil recovered from a spill do not meet EPA's definition of used oil because these oils have never been used. EPA's definition also excludes products used as cleaning agents or solely for their solvent properties, as well as certain petroleum-derived products such as antifreeze and kerosene.
- ▶▶ **Contaminants.** To meet EPA's definition, used oil must become contaminated as a result of being used. This includes residues and contaminants generated from handling, storing, and processing used

oil. Physical contaminants can include dirt, metal scrapings, or sawdust. Chemical contaminants could include solvents, halogens, or saltwater.

The following types of businesses handle used oil:

- ▶▶ **Generators** are businesses that handle used oil through commercial or industrial operations or from the maintenance of vehicles and equipment. Examples include car repair shops, service stations, government motor pools, grocery stores, metal-working industries, and boat marinas. Farmers who produce less than an average of 25 gallons of used oil per month are excluded from generator status. Individuals who generate used oil through the maintenance of their personal vehicles and equipment are

It is important to choose your transporter and your TSDF carefully because you remain responsible for the proper management of your hazardous waste even after it has left your site.

For help in choosing a transporter or TSDF, check with the following sources:

- ▶▶ References from business colleagues who have used a specific hazardous waste transporter or TSDF.
- ▶▶ Trade associations for your industry that might keep a file on companies that handle hazardous waste.
- ▶▶ The Better Business Bureau or Chamber of Commerce in the TSDF's area, which might have a record of any complaints registered against a transporter or a facility.
- ▶▶ Your state hazardous waste management agency or EPA regional office, which can tell you whether the transporter or TSDF has an EPA identification number and a permit, if required. Facility information, including types and quantities of waste managed and violations assessed, can be accessed via the Envirofacts Internet site at <www.epa.gov/enviro>.

not subject to regulation under the used oil management standards.

- ▶▶ **Collection centers and aggregation points** are facilities that accept small amounts of used oil and store it until enough is collected to ship it elsewhere for recycling.
- ▶▶ **Transporters** are companies that pick up used oil from all sources and deliver it to re-refiners, processors, or burners. **Transfer facilities** are any structure or area where used oil is held for longer than 24 hours but not longer than 35 days.
- ▶▶ **Re-refiners and processors** are facilities that blend or remove impurities from used oil so the oil can be burned for energy recovery or reused.
- ▶▶ **Burners** burn used oil for energy recovery in boilers, industrial furnaces, or in hazardous waste incinerators.
- ▶▶ **Marketers** are handlers that either a) direct shipments of used oil to be burned as fuel in regulated devices or b) claim that certain EPA specifications are met for used oil to be burned for energy recovery in devices that are not regulated.

Although different used oil handlers have specific requirements, the following requirements are common to all types of handlers:

Storage

- ▶▶ Label all containers and tanks as Used Oil.

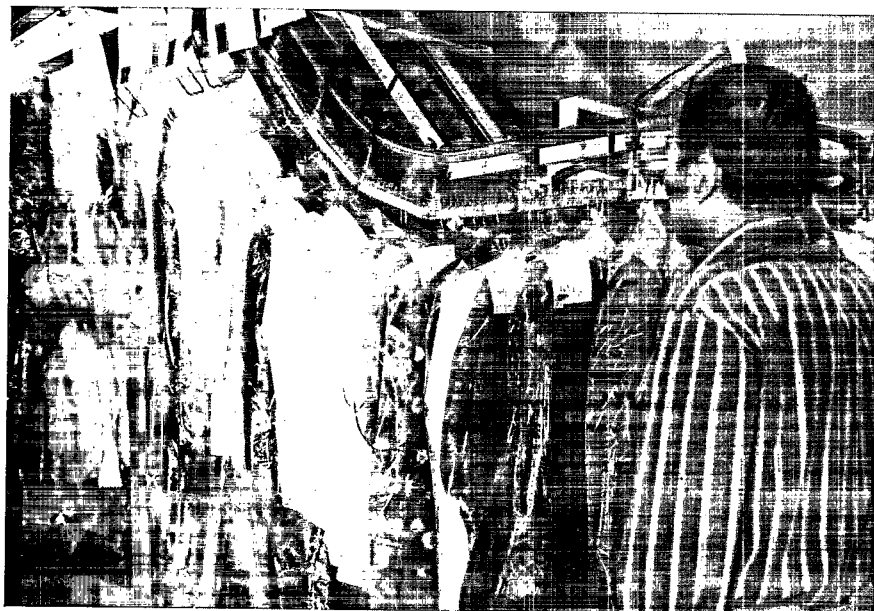
- ▶▶ Keep containers and tanks in good condition. Do not allow tanks to rust, leak, or deteriorate. Fix structural defects immediately.
- ▶▶ Never store used oil in anything other than tanks and storage containers. Used oil also can be stored in units that are permitted to store regulated hazardous waste.

Oil Leaks or Spills

- ▶▶ Take steps to prevent leaks and spills. Keep machinery, equipment, containers, and tanks in good working condition, and be careful when transferring used oil. Keep sorbent materials available at the site.
- ▶▶ If a leak or spill occurs, stop the oil from flowing at the source. If a leak can't be stopped, put the oil in another holding container or tank.

- ▶▶ Contain spilled oil using sorbent berms or spreading sorbent over the oil and surrounding area.
- ▶▶ Clean up the used oil and recycle it as you would have before it was spilled. If recycling is not possible, you must first make sure the used oil is not a hazardous waste and dispose of it appropriately. All used cleanup materials, including rags and sorbent booms, that contain used oil must also be handled according to the used oil management standards.
- ▶▶ Remove, repair, or replace the defective tank or container immediately.

Used oil requirements are detailed in 40 CFR Part 279. For more information, contact the Emergency Response Division's Information Hotline at 202 260-2342.

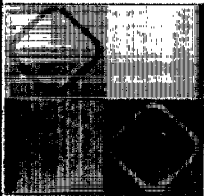




SUMMARY OF REQUIREMENTS FOR LARGE QUANTITY GENERATORS

If you are a Large Quantity Generator (LQG) (generating more than 2,200 lbs (1,000 kg) per month), you must comply with the full set of hazardous waste regulations. This table summarizes the federal LQG requirements. This is only a summary and does not include all of the LQG requirements. For more details, contact the RCRA Call Center at 800 424-9346, or TDD 800 553-7672, or see 40 CFR Part 262. Be sure to check with your state as well because certain states have additional or more stringent requirements than the federal government.

LQG Requirements	Summary
Hazardous Waste Determination (40 CFR Part 262.10) Generator Category Determination (40 CFR Part 262.10 (b) and 261.5 (b) and (c))	Identify all hazardous wastes you generate. Measure the amount of hazardous waste you generate per month to determine your generator category (e.g., LQG).
EPA Identification Numbers (40 CFR 262.12)	Obtain a copy of EPA Form 8700-12, fill out the form, and send it to the contact listed with the form. An EPA identification number will be returned to you for your location.
Prepare Hazardous Waste for Shipment Off Site (40 CFR Parts 262.30 - 262.33)	Package, label, mark, and placard wastes following Department of Transportation requirements. Ship waste using hazardous waste transporter.
The Manifest (40 CFR Parts 262.20 - 262.23, 262.42)	Ship waste to hazardous waste treatment, storage, disposal, or recycling facility. Ship hazardous waste off site using the manifest system (EPA Form 8700-22) or state equivalent.
Managing Hazardous Waste On Site (40 CFR Part 262.34)	Accumulate waste for no more than 90 days without a permit. Accumulate waste in containers, tanks, drip pads, or containment buildings. Comply with specified technical standards for each unit type.
Recordkeeping and Biennial Report (40 CFR Parts 262.40 - 262.41)	Retain specified records for 3 years. Submit biennial report by March 1 of even numbered years covering generator activities for the previous year.
Comply with Land Disposal Restrictions (40 CFR 268)	Ensure that wastes meet treatment standards prior to land disposal. Send notifications and certifications to TSDf as required. Maintain waste analysis plan if treating on site.
Export/Import Requirements (40 CFR Subparts E and F)	Follow requirements for exports and imports, including notification of intent to export and acknowledgement of consent from receiving country.
Air Emissions (40 CFR Part 265, Subpart CC)	If applicable, use various monitoring and control mechanisms to: <ul style="list-style-type: none">• Control volatile organic compound (VOC) emissions from hazardous waste management activities.• Reduce organic emissions from process vents associated with certain recycling activities and equipment that is in contact with hazardous waste that has significant organic content.• Control VOCs from hazardous waste tanks, surface impoundments, and containers using fixed roofs, floating roofs, or closed-vent systems routed to control devices.
Closure (40 CFR Parts 265.111 and 265.114)	Decontaminate and remove all contaminated equipment, structures, and soil, and minimize the need for further maintenance of your site. Meet unit-specific closure standards for tanks, containment buildings, and drip pads.



WHERE TO GET MORE HELP

For further assistance in understanding the hazardous waste regulations applicable to you, contact your state hazardous waste agency. Other assistance resources include the EPA Resource Centers (including the RCRA Call Center), or your EPA regional office (page 24).

Also, see other related sections of the Code of Federal Regulations:

- ▶ Handling PCBs (40 CFR Part 761)
- ▶ Toxic Release Inventory (TRI) Reporting (40 CFR Part 372)
- ▶ Domestic Sewage Waste Disposal Reporting (40 CFR Part 403)
- ▶ Shipping Hazardous Materials (49 CFR Parts 171-180)

EPA and Other Federal Resource Centers

RCRA Call Center

U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW.
Washington, DC 20460
Phone: 800 424-9346, or TDD 800 553-7672. In Washington, DC: 703 412-9810, or TDD 703 412-3323
Web: www.epa.gov/epaoswer/hotline

Answers questions on matters related to solid waste, hazardous waste, and underground storage tanks. Also can be used to find and order EPA publications.

RCRA in Focus

RCRA in Focus is a series of short informational booklets that describes the RCRA regulations as they apply to specific industry sectors. The documents explain what RCRA is, who is regulated, and what hazardous waste is; provide a sample life cycle of a RCRA waste in each industry; include a quick reference chart of all applicable RCRA regulations and a series of waste minimization suggestions for various specific industrial processes; and provide information on other relevant environmental laws and a page of contacts and resources.

Individual issues of *RCRA in Focus* have been written for the following industries:

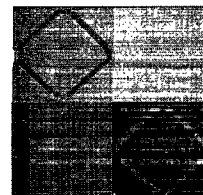
- Dry Cleaning (EPA530-K-99-005)
- Leather Manufacturing (EPA530-K-00-002)
- Motor Freight & Railroad Transportation (EPA530-K-00-003)
- Photo Processing (EPA530-K-99-002)
- Printing (EPA530-K-97-007)
- Vehicle Maintenance (EPA530-K-99-004)

Other issues of *RCRA in Focus* will cover:

- Wood Preserving/Wood Products

- Construction, Demolition & Renovation
- Metals Manufacturing
- Furniture Manufacturing
- Pharmaceutical Manufacturing
- Laboratories

Copies of *RCRA in Focus* can be obtained by contacting the RCRA Call Center at 800 424-9346 or TDD 800 553-7672 and requesting the document numbers listed above. You can also view the documents online at www.epa.gov/epaoswer/hazwaste/id/infocus/index.htm.



**Small Business Ombudsman
Clearinghouse/Hotline**

U.S. Environmental Protection
Agency
Small Business Ombudsman
(1230C)
1200 Pennsylvania Ave, NW.
Washington, DC 20460
Phone: 800 368-5888 or
202 260-1211
Fax: 202 401-2302
Web: www.epa.gov/sbo

Helps private citizens, small busi-
nesses, and smaller communities
with questions on all program
aspects within EPA.

**Department of Transportation
(DOT) Hotline**

Office of Hazardous Materials
Standards (DOT)
Research and Special Programs
Administration
400 7th Street, SW.
Washington, DC 20590-0001
Phone: 202 366-4488 or
800 467-4922
Fax: 202 366-3753
Web: <http://hazmat.dot.gov>

Answers questions on matters
related to DOT's hazardous materi-
als transportation regulations.

**RCRA Docket Information Center
(RIC)**

U.S. Environmental Protection
Agency
RCRA Docket Information Center
(5305W)
1200 Pennsylvania Ave, NW.
Washington, DC 20460
Phone: 703 603-9230
Fax: 703 603-9234
E-mail: [RCRA-Docket@](mailto:RCRA-Docket@epamail.epa.gov)
epamail.epa.gov
Web: [www.epa.gov/epahome/](http://www.epa.gov/epahome/dockets.htm)
dockets.htm

Provides public access to all regu-
latory materials on solid waste and
distributes technical and nontech-
nical information on solid waste.

**Pollution Protection Information
Clearinghouse (PPIC)**

U.S. Environmental Protection
Agency
1200 Pennsylvania Ave, NW.
Washington, DC 20460
Phone: 202 260-4659
Fax: 202 260-0178
E-mail: PPIC@epamail.epa.gov
Web: [www.epa.gov/opptintr/](http://www.epa.gov/opptintr/library/libppic.htm)
library/libppic.htm

Provides a library and an electronic
bulletin board (accessible by any
PC equipped with a modem) dedi-
cated to information on pollution
prevention.

Information Resource Center
U.S. Environmental Protection
Agency

Headquarters Library
1200 Pennsylvania Ave, NW.
IRC (3404)
Washington, DC 20460
Phone: 202 260-5922
Fax: 202 260-5153
E-mail: [public-access@](mailto:public-access@epamail.epa.gov)
epamail.epa.gov
Web: www.epa.gov/natlibra/haire

Maintains environmental reference
materials for EPA staff and the
general public, including books,
journals, abstracts, newsletters,
and audio-visual materials generat-
ed by government agencies and
the private sector.

**Methods Information
Communication Exchange (MICE)**

U.S. Environmental Protection
Agency
OSW Methods Team
1200 Pennsylvania Ave, NW.
(5307W)
Washington, DC 20460
Phone: 703 676-4690 or
703 308-8855
Fax: 703 318-4682 or
703 308-0511
E-mail: mice@cpmx.saic.com
Web: www.epa.gov/sw-846

EPA Regional Offices

EPA Region 1

CT, MA, ME, NH, RI, VT
1 Congress Street
Suite 1100
Boston, MA 02114-2023
617 918-1111 or
800 372-7431 in Region 1
Library: 888 372-5427 or
617 918-1990

EPA Region 2

NJ, NY, PR, VI
290 Broadway
26th Floor
New York, NY 10007-1866
212 637-3000
Library: 212 637-3185

EPA Region 3

DC, DE, MD, PA, VA, WV
1650 Arch Street
Philadelphia, PA 19103-2029
215 814-5000 or
800 438-2474 in Region 3
Library: 215 814-5254

EPA Region 4

AL, FL, GA, KY, MS, NC, SC, TN
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-3104
404 562-9900
800 241-1754 in Region 4
Library: 404 562-8190

EPA Region 5

IL, IN, MI, MN, OH, WI
77 West Jackson Boulevard
Chicago, IL 60604
312 353-2000 or
800 621-8431 in Region 5

EPA Region 6

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1445 Ross Avenue
Suite 1200
Dallas, TX 75202-2733
214 665-2200 or
800 887-6063 in Region 6
Library: 214 665-6424

EPA Region 7

IA, KS, MO, NE
901 North 5th Street
Kansas City, KS 66101
913 551-7000 or
800 223-0425 in Region 7
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EPA Region 8

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One Denver Place
999 18th Street
Suite 500
Denver, CO 80202-2466
303 312-6312 or
800 227-8917 in Region 8

EPA Region 9

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San Francisco, CA 94105
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Library: 415 744-1510

EPA Region 10

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1200 Sixth Avenue
Seattle, WA 98101
206 553-1200 or
800 424-4372 in Region 10
Library: 206 553-1289

Worksheet 3 These questions are geared toward the federal requirements for SQGs but may be helpful for other hazardous waste generators. Use them to help prepare for a visit from a federal, state, or local agency.

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Do you have documentation on the amount and kinds of hazardous waste that you generate and on how you determined that they are hazardous?
<input type="checkbox"/>	<input type="checkbox"/>	Do you have a U.S. EPA identification number?
<input type="checkbox"/>	<input type="checkbox"/>	Do you ship wastes off site?
<input type="checkbox"/>	<input type="checkbox"/>	If so, do you know the name of the transporter and the designated TSDF that you use?
<input type="checkbox"/>	<input type="checkbox"/>	Do you have copies of completed manifests used to ship your hazardous wastes over the past 3 years?
<input type="checkbox"/>	<input type="checkbox"/>	Are they filled out correctly?
<input type="checkbox"/>	<input type="checkbox"/>	Have they been signed by the designated TSDF and transporter?
<input type="checkbox"/>	<input type="checkbox"/>	If you have not received your signed copy of the manifest from the TSDF, have you filed an exception report?
<input type="checkbox"/>	<input type="checkbox"/>	Is your hazardous waste stored in proper containers or tanks?
<input type="checkbox"/>	<input type="checkbox"/>	Are the containers or tanks properly dated and/or marked?
<input type="checkbox"/>	<input type="checkbox"/>	Have you complied with the handling requirements described in this handbook?
<input type="checkbox"/>	<input type="checkbox"/>	Have you designated an emergency coordinator?
<input type="checkbox"/>	<input type="checkbox"/>	Have you posted emergency telephone numbers and the location of emergency equipment?
<input type="checkbox"/>	<input type="checkbox"/>	Are your employees thoroughly familiar with proper waste handling and emergency procedures?
<input type="checkbox"/>	<input type="checkbox"/>	Do you understand when you need to contact the National Response Center?
<input type="checkbox"/>	<input type="checkbox"/>	Do you store your waste for no more than 180 days, or 270 days if you ship your waste more than 200 miles?



ACRONYMS AND DEFINITIONS

Byproduct

A material that is not one of the primary products of a production process. Examples of byproducts are process residues such as slags or distillation column bottoms.

CESQG—Conditionally Exempt Small Quantity Generator

A business that generates less than 220 lbs (100 kg) per month of hazardous waste.

CFR—Code of Federal Regulations

The CFR is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the federal government. The CFR is divided into 50 "titles," which represent broad areas subject to federal regulation. Each title is divided into chapters, which usually bear the name of the issuing agency.

Commercial Chemical Product

A chemical substance that is manufactured or formulated for commercial or manufacturing use.

Container

Any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

DOT—Department of Transportation

Federal agency that oversees all national transportation systems and regulates the transport of hazardous materials.

Elementary Neutralization Unit

A tank, tank system, container, transport vehicle, or vessel (including ships) that is designed to contain and neutralize corrosive waste.

Implementing Agency

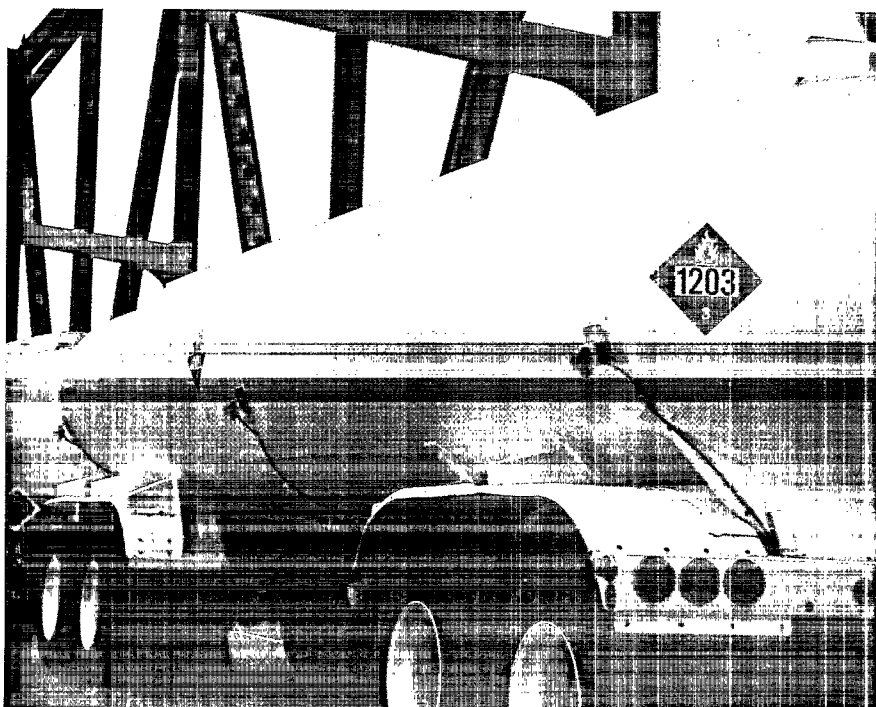
EPA regional office or state agency responsible for enforcing the hazardous waste regulations.

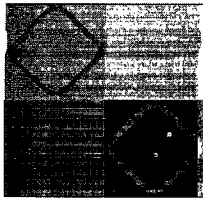
Incompatible Waste

A hazardous waste that can cause corrosion or decay of containment materials, or is unsuitable for comingling with another waste or material because a dangerous reaction might occur. See 40 CFR Part 265, Appendix V for more examples.

LDR—Land Disposal Restrictions

The LDR program ensures that toxic constituents present in hazardous waste are properly treated before hazardous waste is disposed of in the land (such as in a landfill).





LQG—Large Quantity Generator

A business that generates more than 2,200 lbs (1,000 kg) per month of hazardous waste.

MICE—Methods Information Communication Exchange

The MICE service provides answers to questions about test methods used to determine whether a waste is hazardous. It also takes comments on technical issues regarding EPA's methods manual known as Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846).

MSDS—Material Safety Data Sheets

Chemical manufacturers and importers prepare detailed technical bulletins called Material Safety Data Sheets about the hazards of each chemical they produce or import. Your suppliers must send you an MSDS at the time of the first shipment of a chemical and any time the MSDS is updated with new and significant information about the hazards. MSDSs include information about components and contaminants, including exposure limits, physical data, fire and explosion hazard, toxicity, and health hazard data. It also discusses emergency and first aid procedures and information about storage and disposal, and spill or leak procedures.

NFPA—National Fire Protection Association

NFPA's mission is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically based codes and standards, research, training, and education. NFPA has specific rules for storing hazardous wastes.

PBT—Persistent, Bioaccumulative, and Toxic

Persistent chemicals are those that don't readily break down in the environment and can be transferred among air, water, soils, and sediments. Bioaccumulative chemicals are those that concentrate in animal and plant tissues as a result of uptake from the surrounding environment or as a result of one organism consuming another. Toxic chemicals, in this context, are those that are hazardous to human health and the environment. EPA has been tasked with focusing on reducing the toxicity of wastes in addition to the quantity of waste, and its Waste Minimization National Plan focuses on reducing PBT wastes.

POTW—Publicly Owned Treatment Works

A municipal wastewater treatment plant that receives wastewater through the public sewer from households, office buildings, factories and industrial facilities, and other places where people live and work.

Reclaimed Material

Material that is regenerated or processed to recover a usable product. Examples are the recovery of lead values from spent batteries and the regeneration of spent solvents.

Recovered Material

A material or byproduct that has been recovered or diverted from solid waste. Does not include materials or byproducts generated from, and commonly used within, an original manufacturing process.

Recycled Material

A material that is used, reused, or reclaimed.

Reused Material

A material that is employed as an ingredient in an industrial process to make a product, or is used as an effective substitute for a commercial product.

Spent Material

Any material that has been used and, as a result of contamination, can no longer serve the purpose for which it was produced without first processing it.

SQG—Small Quantity Generator

A business that generates between 220 and 2,200 lbs (100 and 1,000 kg) per month of hazardous waste.

Sludge

Any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, exclusive of the treated effluent from a wastewater treatment plant.

Still Bottom

Residue or byproduct of a distillation process such as solvent recycling.

Tank

A stationary device designed to contain an accumulation of hazardous waste and that is constructed primarily of nonearthen materials (e.g., wood, concrete, steel, plastic).

Totally Enclosed Treatment Facility

A facility for the treatment of hazardous waste that is directly connected to an industrial production process and that is constructed and operated to prevent the release of hazardous waste into the environment during treatment. An example is a pipe in which waste acid is neutralized.

TCLP—Toxicity Characteristic Leaching Procedure

A testing procedure used to determine whether a waste is hazardous. The procedure identifies waste that might leach hazardous constituents into ground water if improperly managed.

TSDF—Treatment, Storage, and Disposal Facility

Refers to a facility that treats, stores, or disposes of hazardous

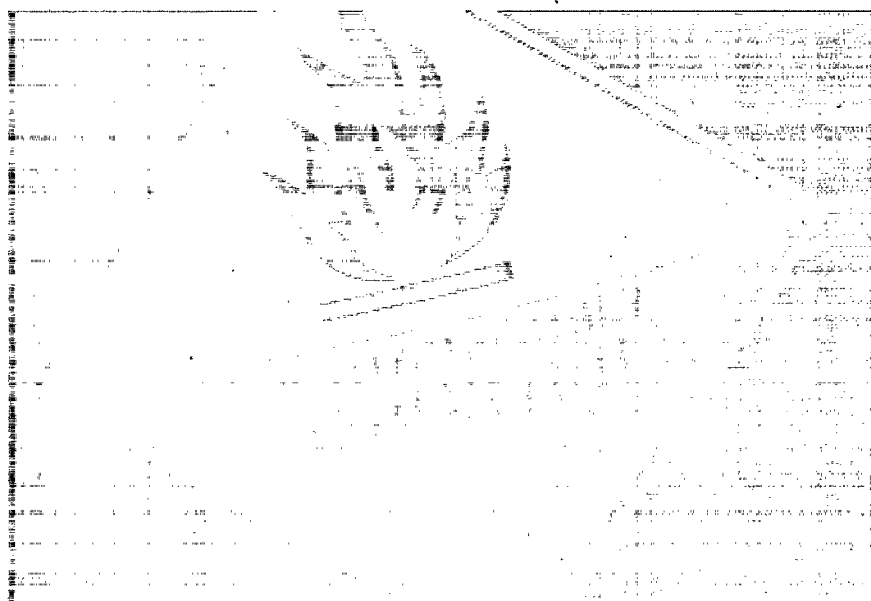
waste; TSDFs have specific requirements under RCRA.

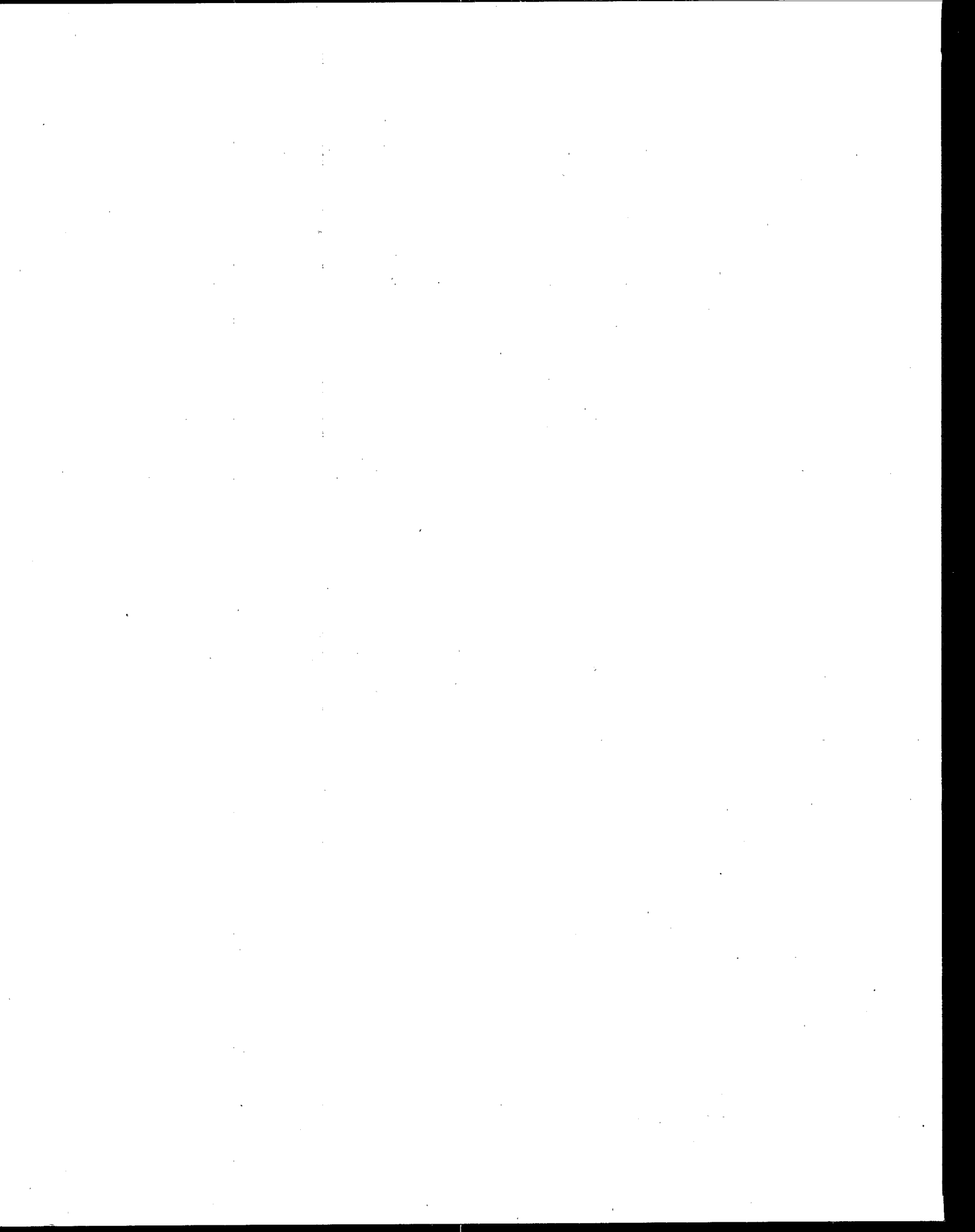
VOCs—Volatile Organic Compounds

VOCs are highly evaporative organic gases that can be produced during the manufacture or use of chemicals such as paints, solvents, and cleaners. Various pollution control devices can prevent the release of VOCs both outdoors and indoors.

Wastewater Treatment Unit

A tank or tank system that is subject to regulation under either Section 402 or 307(b) of the Clean Water Act, and that treats or stores an influent wastewater that is hazardous waste, or that treats or stores a wastewater treatment sludge that is hazardous.







United States
Environmental Protection Agency
(5305W)
Washington, DC 20460

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Penalty for Private Use \$300

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